



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,663	06/23/2005	Gary Wayne Yewdall	YEW0101PUSA	2899
22045	7590	09/16/2008		
BROOKS KUSHMAN P.C. 1000 TOWN CENTER TWENTY-SECOND FLOOR SOUTHFIELD, MI 48075			EXAMINER LEE, CLOUD K	
			ART UNIT 3753	PAPER NUMBER
			MAIL DATE 09/16/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/540,663	Applicant(s) YEWDALL ET AL.	
	Examiner CLOUD K. LEE	Art Unit 3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-9 and 11-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-9 and 11-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the internal shape that allows the fluid to drain out of the valve body (claims 1, 7 and 11), a down stream connector contoured and smooth to promote free draining including a small discontinuity sized to break surface tension (claim 4), and a thermodynamic external body shape to maximize achievable temperature in the down stream side and downstream connector of the valve (claims 5, 9 and 13) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

The drawings are objected to under 37 CFR 1.84(p). Reference character (numerals are preferred), sheet numbers, and view numbers must be plain and legible, and must not be used in association with brackets or inverted commas, or enclosed within outlines, e.g., encircled.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet”

pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 4-5, 9 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is vague and indefinite as to what is meant by “to promote free draining including a small discontinuity sized to break surface tension” in claim 4 because Applicant has recited these functional limitations without further defining how or why the structure of the claimed invention is capable of performing these functional limitations in the specification. Also, one of ordinary skill in the art would not be apprised of the metes and bounds of “promote free draining including a small discontinuity sized to break surface tension”. What is the scope of these limitations? Is applicant claiming the smoothness of the connector has “no surface tension” or “small surface tension”? If so, what is the coefficient of surface tension being considered as “small surface tension”? Also, what is the definition of “small discontinuity sized to break surface tension”? How small is considered small?

It is vague and indefinite as to what is meant by “a thermodynamic external body shape to maximize achievable temperature” in claims 5, 9 and 13. It is unclear that what shape of claimed invention is capable of performing “maximize achievable temperature”. One of ordinary skill in the art would not be apprised of the metes and bounds of these limitations. Applicant’s Remark filed on 6/16/08 does not clarify this issue, one of ordinary skill in the art would not apprised the scope of claims 5, 9 and 13. What is a thermodynamic external body shape? The Examiner is respectfully requesting the applicant to clarify or more clearly define the scope of claims 5, 9 and 13.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-5, 7-9, 11-13 (as best understood) are rejected under 35 U.S.C. 102(b) as being anticipated by Kusumoto et al (US Patent No. 6,227,236).

Kusumoto et al. discloses a smooth and contoured body, the body having no obstacle in the flow path to disrupt the fluid flow other than a step between the inlet 2 and body 1, which is seen as a discontinuity surface. Kusumoto includes an integral upstream connector (2), downstream connector (3) and defined flow path. A flexible sealing membrane (6) is selectively moveable into contact with the said valve body to close said valve, selectively moveable out of contact with the said valve body to open said valve and selectively operable to a range of

positions to vary the flow rate of medium through the valve. Kusumoto et al. discloses a valve body defined an internal shape that allows the medium to drain out of the said valve body. An elongate heater (20 and 22) is secured into said valve body in a location so as not to be in contact with the medium or disrupt the internal smooth and contoured body, said heater is being operative to heat the valve body to a predetermined temperature. Kusumoto et al. also discloses the heater is capable of raising the temperature of said valve body around the downstream side of the metal sealing face (4a) above 121.degree. C (Col 5 lines 56-61). A thermodynamic external body is shaped to maximize the heat into the metal sealing face (4a) that comes into contact with the flexible sealing membrane (the valve body is made by metal and allow the body to maximize the heat into the metal sealing face (4a)).

6. Claims 1-5, 7-9 and 11-13 (as best understood) are alternatively rejected under 35 U.S.C. 102(b) as being anticipated by Chovan (US Patent No. 5,941,271).

Chovan discloses a smooth and contoured body (32), the body (32) having no obstacle in the flow path to disrupt the fluid flow other than a step between the connector (18) and body (32), which is seen as a discontinuity surface. Chovan includes an integral upstream connector (20), downstream connector (18) and defined flow path. A flexible sealing membrane (30) being selectively moveable into contact with the said valve body to close said valve, selectively moveable out of contact with the said valve body to open said valve and selectively operable to a range of positions to vary the flow rate of medium through the valve. Chovan also discloses the valve body defined an internal shape that allows the medium to drain out of the said valve body. An elongate heater (90) is secured into said valve body in a location so as not to be in contact

with the medium or disrupt the internal smooth and contoured body, said heater is being operative to heat the valve body to a predetermined temperature. Chovan further discloses the heater is capable of raising the temperature of said valve body around the downstream side of the metal sealing face (24). A thermodynamic external body is shaped to maximize the heat into the metal sealing face (24) that comes into contact with the flexible sealing membrane (the valve body is made by metal and allow the body to maximize the heat into the metal sealing face (24)).

Response to Arguments

7. Applicant's arguments filed 6/16/08 have been fully considered but they are not persuasive.

In response to applicant's argument that Kusumoto does not disclose or suggest an elongated heater mounted within the valve body, the Examiner respectfully disagrees with applicant because of the following reason. Kusumoto shows elongated heaters (20 and 22) are mounted within the valve body. Applicant also stated that "one of ordinary skill would appreciate that heater 20 of Kusumoto requires electrical wires that would also be in the flow path (see Remark, Page 12)." The Examiner respectfully disagrees with applicant's statement above. First of all, applicant is making the assumption that the electrical wires that would be in the flow path, and such assumption is not supported or shown in Kusumoto. Figures of Kusumoto do not show any electrical wire in the flow path that disrupt the internal smooth and contoured body. Secondly, one of ordinary skill in the art would also appreciate that electrical wires for heaters (20 and 22) should be isolated away from the flow path in order to protect the electrical wires. Thirdly, the claims in the current application recites "an elongated heater

mounted within the valve body in a location so as not to be in contact with the fluid or disrupt the internal smooth and contoured body”, even if Kusumoto does disclose the electrical wires for heaters (20 and 22) is in the flow path, the heaters (20 and 22) of Kusumoto are clearly mounted within the valve body, therefore, applicant’s argument is not related to the scope of the claims in the current application.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **CLOUD K. LEE** whose telephone number is (571)272-7206. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Huson can be reached on (571)272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Stephen M. Hepperle/
Primary Examiner, Art Unit 3753

CL